tattooed or there was in the middle of the face a semielliptical, blue-black spot from which numerous, parallel lines extended over the chin and lower jaw down to the breast. From the middle of one shoulder to the other, two or three lines half an inch apart run across the broad chest. Under these there are vertically placed diamonds, some filled in, some left in outline to the end of the chest. The rest of the torso is adorned similarly though not so completely and the same lines are repeated on the extremities with or without the diamonds. Variations are introduced according to individual taste. Among women the whole face is rarely blackened, they have only a malha, a crescent shape, the pointed horns of which are turned upward. Their [288] ears are pierced, not in the lobe, but at the top in the first fold and they wear cane pegs in the holes. The face of these people is wide, with a low forehead shadowed by the hair which is cut straight across, the facial features marked, coarse and expressive of good nature. The eyes are always dark and not so slanted as the eyes of Indians of the more southerly tribes. The nose is large, often somewhat curved, not so short and blunt, with flaring nostrils, like those we have noticed among the Indians of eastern Brazil. Their heads are covered with thick, shining black hair which turns gray among the Mundrucus only late and then only in individual cases. I have never seen among them, any more than among any other Indians, an old man who was white-headed. In the wilds they are unclothed except that the men wear a jack strap [Suspensorium] of cotton or a tucanduiba. The women I saw were wholly naked, even in the mission, and to get an apron on them for church was a matter of some difficulty. The Mundrucus and their neighbors, the Maues, with whom they are friendly, are, like the Apiacas, skilled in the art of spinning cotton thread and weaving hammocks which they hang outside their huts on hot nights. To catch fish they usually poison the water in which the fish are found.* They make

*They do this in ponds or dammed up brooks by stirring the crushed twigs and leaves of the timbo (Paullinia pinnata) into the water until it turns dark and foams. The fish, and even crocodiles, come to the surface belly up, stupefied or dead and the fish are eaten. The water is extremely poisonous.

4: Horton E-4 (no date) 1946
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Barbed arrows are used more commonly than hook and line in fishing. Steinen's vocabulary (1932) includes references to basket traps and weirs. Fish and crocodiles are drugged with poison from twigs and leaves of the timbó.

Food preparation.—Cooking is women's work. Dishes mentioned in the literature include roasted sweet potato, banana mush, manioc broth, cará fruit soup, and a dish consisting of Brazil nuts which have been washed, soaked in water, smoked, crushed, and roasted. Meat is roasted on a halbrace of green sticks or on a slanting spit. Steinen's vocabulary includes a word for manioc press and a phrase meaning "roasting house for manioc meal." Mortar and pestle are reported. Beverages are made from wild beans, cacao, and manioc meal mixed with honey and water. The *Mundurucú* had no native alcoholic beverages.

They raise tobacco and smoke it in the form of cigars wrapped in cassiri bark.

VILLAGES AND HOUSES

Tocantins and Farabee imply that the dwellings are arranged around the periphery of an open village plaza in the center of which is the men's house. Bates, however, mentions a settlement of 30 houses scattered for a distance of 6 or 7 miles along a river bank; and Martius (Spix and Martius, 1823–31, vol. 3) speaks of houses arranged in rows in a forest clearing.

The men's house (ehoga) occupied by the warriors, is a prominent feature of the village. Tocantins describes one 100 m. (325 feet) long, covered with thatch and open on one of its long sides. A photograph of a men's house in Farabee (1917 a) shows a rectangular structure, smaller and more crudely built than the dwelling house, with a gable roof and inconspicuously enclosed sides. The warriors slung their hammocks from posts inside it during the winter and from a series of posts set in three parallel rows and united by cross beams, in the village plaza, during the summer. Although warfare is no longer an important aspect of *Mundurucú* life, the men's house still serves as a men's work place and as a dwelling for the unmarried men. Women are not permitted to enter it.

The dwelling house (ehoga, "big house") photographed by Farabee is a long, rectangular, windowless structure with a high thatched roof and low walls. The men's door is in the center of the long side facing the men's house; the women's door is directly opposite. Steinen describes the house as a long, rectangular building with a roof sloping to the ends and sides, and with rising peaks at each end of the roof crest, but in a later publication (1925) he speaks of the house as "dome-shaped." In the 1830's, Bates found that most of the dwellings had conical roofs and walls of framework filled with mud. The roof was covered with palm thatch, and the eaves extended halfway to the ground. Martius also reported conical roofs.

deer were also more effectively hunted in groups, not only because of the advantages of the ambush, but because an arrow wound is frequently not fatal, especially at longer range, and, if there are two or three hunters, the possibilities of successfully dispatching the animals are increased.

Fishing

Fishing was an economic activity definitely secondary to hunting, although as we will see later, the circumstances of acculturation have changed one large section of the tribe to a group which relies primarily on fish for proteins. The aboriginal Munduruc generally built their villages in places several hours inland from the nearest navigable streams. Thus their defensive position was improved while in no way impairing their attacking power. This settlement pattern was well adapted to a warrior society, but removed them from the best fishing sites. The small streams within easy reach of the villages yielded only smaller species of fish and in limited quantity. That the Munduruc relied little on the water system for food or transportation is shown by the fact that only in recent times has the dugout canoe been adopted on even a small scale. The usual extant Munduruc canoe is of the double ended plank type made by the Brazilians and sold to the Indians by the rubber traders. In pre-contact times, the only water craft used was the bark canoe of the type described by Von den Steinen on the upper Xingu River.[8] But even this canoe was native to the Munduruc for they colonized

8. Steinen, 1894, pp. 323-325.

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edge it to have been learned from their Tupian neighbors, the Apiaca. In early times, this bark canoe was used only to cross large streams when on a war expedition. Small streams were crossed either on fallen logs or by swimming. Today, canoes are in greater use, but very few are owned among three Kaduveo of the savannahs.

An additional factor limiting fishing is that the annual rains cause the rivers to overflow their banks allowing the fish to disperse through the forest in search of fallen berries and fruits. During this season, fishing is very difficult throughout the entire rain forest region, even for those people having canoes. For the Kaduveo, who had to fish from the river banks, it was a sheer impossibility. The Indians of the present village of Cabral complain that they have no canoes and that to fish during the rainy season would involve wading through the igapó, or flooded forest, impractical due to poisonous and constrictor water snakes, covered roots and logs, and the virtual assurance of failure.

Dry season fishing was done by two means. The first of these was to fish from the river bank with bow and arrow. To facilitate this technique, platforms were often built on the limbs of trees overhanging the water. The Kaduveo have great skill in fishing with the bow and arrow, and it is still preferred to the hook and line, which was introduced by the whites and is only used during the rainy season when the fish are scarcer and at a greater depth.

226 [278] The second and equally important method was by poisoning the waters of lakes and medium sized streams with timbó (Paullinea pinnata), a fish poison used throughout the Amazon. The timbó paralyses the gills of the fish, thus suffocating it. The fish remains edible as timbó does not poison the fish internally. The poison is contained in the long roots of a plant which grows wild in the forest but [279] which is commonly cultivated by the Indians in their gardens.

When a timbó expedition was organized, all of the men who participated went to the gardens to pull up the roots of the plant. These were chopped into one foot pieces, wrapped in a bundle, and brought back to the village. Before dawn of the next day, or the afternoon before, if the chosen fishing site was distant, the party embarked. The best places to fish with timbó were in restricted bodies of water where the poison would have greatest density and the fish the least possibility of escape. For this reason, streams and inter-island channels of about fifty feet in width or lagoons of limited size having only one entrance were preferred. Upon arriving at the location early in the morning, the party broke up into two, three, or possibly four groups, depending on the number of people involved. Those men who were to poison the water went upstream while the rest of the men and the accompanying women and children waited for the stunned fish to swim downstream. The poisoners then placed their bundles of timbó on a rock or log in the water and began to beat them with a heavy stick, causing the white

226 poisonous sap to be exuded into the stream. They occasionally dipped the bundles to wash out the sap more thoroughly. The excited cries of those waiting downstream informed them that the poison was taking effect, and, when the drug had been mostly beaten out of the roots, they went downstream to join the others in the collection of the fish.

The downstream scene was always one of sheer pandemonium. Everybody was usually in the water trying to catch the fleeing fish which were already semi-stupified by the drug. The women used handnets to scoop up the fish while the men impaled them with fishing arrows or clubbed them. At large tinbó parties the water was poisoned by two or three separate groups at points about 1000 feet apart along the stream. As soon as the fish began fleeing downstream from the group furthest upstream, a sentinel stationed a short distance downstream gave several loud shouts to the next group, signalling them to start poisoning the water. The fish thus had very little opportunity to escape to pure water. To prevent any from making their escape, a dam made of branches set into the stream bottom was sometimes placed about a mile downstream from the fishing location. A space was left open until the morning of the fishing to allow the fish to swim upstream during the night. This system is particularly effective when fishing for the patrinchã (Bryconopsis brevicauletus Gunther) that swims up the smaller streams every night to sleep and then returns downstream with the coming of day.

226 These communal fishing trips were usually undertaken by the people of one village but occasionally involved hundreds of people from several communities. The efficacy of this system of fishing can be attested to by the writer who took part in one such expedition in which over one hundred people from four different villages participated and approximately three tons of fish were killed. The fish were preserved by smoking, salting, and sun drying and remained edible for a period of one week to ten days. Modern timbó fishing [251] is done in the same manner as in aboriginal times. This is also true of the gathering of wild fruit, nuts, and berries.

222

Gathering of wild vegetable products

Gathering is and was the least important subsistence activity and food source among the Mundurucú and was often done incidentally to hunting, fishing, or trips to the gardens. Among the main articles gathered were several species of palm fruit, Brazil nut, the fruit of the pajú tree (Couepia caryophyllum), wild cocoa, sorocha, and several varieties of berries.

Those wild vegetable foods found only at long distances from the village were always gathered by the men on the way home from hunting, especially if they had been unsuccessful. When the fruit trees were near the village, one man or an older boy usually went out with a party of women, the boy to climb the tree and get the fruit, the women to carry it home. Climbing was done with climbing ring, a

unimportant. Otherwise, the husband visited his household for purposes of sex, to play with the children, or to take a between-meals snack. 513

Marital breakups caused no great social maladjustment. The women and her children simply lived on in the household and took another husband. If the ex-husband was originally from the same village, he did not even have to move his hammock from the man's house. The husband and wife performed no economic tasks together, and the sexual division of labor operated solely within the context of the village as a whole rather than the nuclear family. [SU] [RL]

The yearly cycle of activity of the pre-rubber period Mundurucú was not patterned by wet and dry seasons as in Labrador, but by rainy and dry periods. At the end of each rainy season, April in the upper Tapajós River, the trees and vegetation in each projected garden were felled by a work party composed of all the men of the village and allowed to dry out. After clearing the forest, many families went in small groups to the larger streams where fishing was good during low water and where they could hunt the many game animals which left the inundated forests to feed and drink at the streams. 234 241 [224] 225

After two to three months it was necessary to return to the village to burn the felled vegetation in the garden clearings before the first rains set the forests. After the early rains had sufficiently moistened the ground, individual gardens were planted to manioc by the cooperative efforts of all the men and women of the village. Other vegetables were planted by the women of the household of the man who initiated the gardens, and who was formally considered to own it.

Maize, squash, beans, and other vegetables were harvested by January or February and eaten immediately. The root crops, including bitter and sweet manioc, matured at the end of the rainy season in new gardens. A longer period of maturation was required for root crops in replanted gardens. Bitter and sweet manioc can be harvested as needed; this natural storage made these crops invaluable for year-around subsistence.

The bitter manioc, by far the most important garden product, required considerable labor to render it edible. The tubers were grated, the grated mash was extracted by use of the tipiti, or basketry press, and the pulp was then toasted either in the form of the native beiju, a flat manioc cake, or of farinha, the coarse Brazilian manioc flour. Farinha was sold to Brazilian traders. All phases of manioc processing were carried out by the women of the extended family households, who worked together under the direction of the oldest woman of the house. The labor was divided according to specialized tasks which, however, probably contributed as much towards making the operation pleasant as efficient. 252 [434]

Farinha was thus a collective product in that it involved the communal labor of the village in garden clearing and manioc planting, and the efforts of the women of the household in processing. Moreover, it was sold to the traders by the village as a whole and not by individuals. In this barter the hereditary village chief represented the village, and the proceeds from the sale were distributed equally among the contributing households. 476 439 [423]

Bates, the British naturalist, describes the ease in which this trade was conducted in the mid-nineteenth century, when the first small quantities of rubber were traded by the Mundurucú along with larger amounts of other produce: 439

> "They [the Mundurucú of the upper Tapajós River] make large plantations of manioc, and sell the surplus produce, which amounts on the Tapajós to from 3000 to 5000 bushels (81 lbs. each) annually, to traders who ascend the river from Santarem between the months of August and January. They

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The *putcha ö* emits two types of malignant object, called the *pakip* and the *wirabad*. The latter has already been explained as a supernaturally powerful, stonelike object in which the *putcha ö* is sometimes found. The *pakip*, on the other hand, is thought to be an evil force that is found in the form of a louse. Both the *wirabad* and the *pakip* are parts of a general, dangerous power, called *ebawai*, that exists in all animals. The Munduruú believe that every animal possesses a *wirabad* and a *pakip* as part of its power (*ebawai*); these malignant forces apparently can be controlled by the *putcha ö* and used by it to avenge the grievances visited upon the animal world by humans. The *pakip* or the *wirabad* can also be sent by the animal souls as well as by the *putcha ö*. One shaman stated that the *pakip* often enters the victim to weaken him, and the *wirabad* then arrives to kill him.

Finally, every species of game animal has a mother spirit that exerts protection over the species. These mothers are decidedly secondary in importance to the *putcha ö*, or mother of all game, and the only ones that figure importantly in Munduruú thought are the *bai ö*, the *dajo ö*, the *repoom ö*, and the *tasd ö*, or the mothers of the tapir, the peccary, the deer, and the prego monkey, respectively. The species mothers are given offerings at ceremonies and shamanistic performances, as is the *putcha ö*, and they are capable of avenging any offense given to their respective children. However, the Munduruú commonly speak of "feeding the *putcha ö*" and of the "vengeance of the *putcha ö*," though scant reference is given to the species mothers in these connections. Also, the species mothers are never found in the land tortoise or the coatá monkey, nor are they believed to be manifest in the form of *wirabad*. On the contrary, the species mothers are found only in certain of their children, and their presence in the animal can be detected only by a shaman.

Another class of mothers is associated with aquatic life and is of less importance than the animal mothers. The *aoima ö* is the mother of the fish, a position equivalent to that of the *putcha ö* in the animal world. The *aoima ö* travels in small alligators and can be found by the shaman in many places where fish are known to abound. In addition to its association with all species of fish, the *aoima ö* is also believed to be the mother of all aquatic reptilian, amphibian, and mammalian life.

Individual species of fish do not have mothers, but the tartarugas and tracajá, species of river tortoise, have mother spirits that are found within some of their children. The only other aquatic species having a mother is the peixe-boi, or manatee. The mother of the peixe-boi can be found only within certain tapirs. There are no special ceremonies for these spirits, but they, too, are propitiated in the general ceremonies for spirit mothers.

This account of supernatural beliefs associated with game animals represents the norm of informant responses on the subject. Munduruú beliefs are not, however, absolutely uniform and rigid, and there was a certain variation in individual views on the subject. There was, for example, some disagreement on the nature of the *wirabad*, although all informants agreed that it was like a

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makes a dispersed settlement pattern necessary. Transportation in the region is only by canoe, and this, combined with the long work day, necessitates the placement of the house near the rubber avenue. The result is an average distance between houses of one mile, longer intervening stretches occurring in districts poor in rubber and thus submarginal in today's market.

The rubber tapper's work is not finished when he returns to his house, for he still must smoke and thereby cure and congeal the liquid latex. This process usually occupies about three hours, but if his yield is great, it can take up to five hours. Since his poverty is such that he can afford to buy only certain staple foodstuffs, he is often forced to fish until late in the night after he has smoked his rubber. The small amount of game eaten is usually killed by him during his rounds of the rubber trees. The only other important subsistence activity, slash-and-burn agriculture, is not often practiced by the rubber cutter because good land within a feasible distance of his house is rare, because the patron, to whom he usually is indebted requires extra services in addition to a maximum production of rubber, and because he is resigned in apathy to his hopeless situation. Under these circumstances of great distance from his neighbors and preoccupation with a barter economy requiring complete individualization of production, the bonds of economic cooperation and interdependency are weak within the local community. The caboclo has no recourse because he is usually held in debt servitude to the trader, and because the region, in its present state of economic development, offers few alternatives. This, then, is the milieu into which the remaining Munduruc6 are being progressively drawn and into which many of their forebears have already been assimilated.

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Whereas it is possible for only one to three men to hunt other species of animals, the entire male population of one or two villages is needed for profitably hunting wild pig. This animal always travels in large bands of at least twenty and up to one hundred. Under these circumstances a single hunter can kill only one or, at best, two pigs before stampeding the herd, but a large group of men can surround the animals and obtain a food supply sufficient for two or three days. Tapir, wild pig, and deer are also more effectively hunted in groups, not only because of the advantages of the ambush, but because an arrow wound is frequently not fatal; if there are two or three hunters, the possibility of successfully dispatching the animal is thereby improved.

The increased use of firearms is highly significant in this regard. Even a ball from a muzzle-loading shotgun has greater range and velocity than an arrow. The lower power of the arrow is especially noticeable at longer distances, for its large surface area causes it to be considerably slowed by air friction. Besides, the bullet has greater stopping power. This is important, for wild pig and tapir frequently run for hours with two or three arrows in their bodies. In the village of Cabruá, the men owning firearms frequently hunted deer and tapir alone, while those using bows and arrows depended on their companions for added firepower and the opportunity to mount ambushes from which the animals could be shot at close range. Since firearms are still scarce in the savannah villages, collective hunting patterns remain relatively undisturbed, and the hunt may be considered a cohesive factor in village life.

FISHING

Fishing is secondary in importance to hunting in the subsistence economy of the savannah villages, but the Mundurucú who have moved to the shores of the larger

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streams rely primarily upon fish for protein. The savannah villages are several hours inland from the nearest navigable streams. This settlement pattern was well adapted to the defensive requirements of a warrior society, but it removed the communities from the best fishing sites. The narrow, shallow streams within easy reach of the villages yield only smaller species of fish and in limited quantities.

The Munduruců relied little on the river system for food or transportation in times past, as is shown by the fact that only in recent years has the dugout canoe been adopted on even a small scale. The modern Munduruců canoe is usually of the double ended plank type made by the Brazilians and sold to the Indians by the rubber traders; before contact with the whites the only water craft used was the bark canoe. Not even this canoe, however, was native to the Munduruců for they acknowledge having acquired it from their Tupian-speaking neighbors, the Apiacá. In early times, the bark canoe was used only to cross large streams when the Indians were on war expeditions. Small streams were crossed either on fallen logs or by swimming. Today, canoes are in greater use, but very few are owned among the Munduruců of the savannahs, despite their annual dry-season residence on large streams. Only two men in the village of Cabruá owned canoes and no one in Cabitutú had one.

An additional factor limiting fishing is that the annual rains cause the rivers to overflow their banks, allowing the fish to disperse through the flooded forest where they feed on fallen berries and fruits. During this season, fishing is difficult in the rain-forest region, even for people having canoes. For the Munduruců, who have to fish with bow and arrow from the river banks, it is almost impossible. The modern residents of Cabruá say that their lack of canoes would make it necessary for them during

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the rainy season to fish by wading through the igapó, or flooded forest—impractical because of poisonous and constrictor water snakes, covered roots and logs, and the virtual assurance of failure. 226

These formidable obstacles restrict the savannah people to one or two trips per rainy season to streams where small fish are taken by drugging. The yield is unimportant in the total rainy season diet, and the expeditions do little more than satisfy a desire for variety in food. Fishing is quite important during the dry season, however, when the people move to their rubber-avenue homes on the banks of large streams. This, as has been mentioned, represents a continuation and intensification of a pattern [221] that predates the rubber trade; in those times, the villagers spent several weeks every dry season in temporary camps along the rivers, where they hunted and caught fish.

Dry-season fishing is done by two means: The first is to fish from the river bank with bow and arrow. To facilitate this technique, platforms are often built in the limbs of trees overhanging the water. The Munduruc6 have great skill in fishing with the bow and arrow, and it is preferred to the hook and line, which was intro- [177] duced by the whites and is only used during the rainy season when the fish are scarcer and at a greater depth, and the turgid flood waters make the bow and arrow useless.

A second and equally important method is by poisoning the waters of lakes and medium sized streams with *timbó*, a generic term for a variety of fish poisons used throughout the Amazon. The timbó paralyzes the gills of the fish and suffocates it, but the fish remains edible as it does not become poisoned internally. Timbó is found in wild form in forest lianas, but the Munduruc6 use

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226 the poisonous root of a shrub which is cultivated in their gardens.

A group timbó fishing expedition is usually organized and directed by the man who supplies the drug and issues the invitations; the invited participants help in the task of pulling up the roots. These are chopped into one-foot pieces and wrapped in bundles. Before dawn of the next day, or on the afternoon before if the chosen fishing site is distant, the party embarks. The best places to fish with timbó are in restricted bodies of water where the poison may attain greatest density and the fish have the least possibility of escape. For this reason, streams and inter-island channels of about thirty feet in width or lagoons of limited size having only one entrance are preferred. Upon arriving at the location early in the morning, the party breaks up into two, three, or possibly four groups, depending on the number of participating people. The men who are to poison the water go upstream while the rest of the men and the accompanying women and children wait for the stunned fish to swim downstream. The poisoners then place their bundles of timbó on a rock or log in the water and begin to beat them with a heavy stick, causing the white poisonous sap to be exuded into the stream; they periodically dip the bundles to wash out the sap more thoroughly. The excited cries of those waiting downstream inform them that the poison is taking effect, and, when the drug has been thoroughly beaten out of the roots, they go downstream to join the others in the collection of the fish.

The downstream scene is always pandemonium. Everybody is usually in the water trying to catch the fleeing fish, which are already semistupified by the drug. The women use handnets to scoop up the fish while the men impale them with fishing arrows or club them. At large

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timbó parties the water is poisoned by two or three separate groups at points about 1,000 feet apart along the stream. As soon as the fish begin fleeing downstream from the group farthest upstream, a sentinel stationed a short distance downstream gives several loud shouts to the next group, signaling them to start beating the drug into the water. The fish thus have little opportunity to escape to pure water. To prevent any from making their escape, a dam made of branches set into the stream bottom is sometimes placed about a mile or two downstream from the fishing location. A space is left open until the morning of the fishing to allow fish to swim upstream during the night. This system is particularly effective to catch the *matrinchão* (*Brycon brevicaudatus* Gunther), which ascends the smaller streams every night to sleep and then returns downstream with the coming of day. 224

These communal fishing trips are undertaken by as many persons as can conveniently gather together; lack of canoes and the long distances between rubber-avenue dwellings limit the size of these gatherings among the contemporary campineiros. The efficacy of this system of fishing is remarkable. My wife and I took part in one such venture on the Cururú River in which more than one hundred people from four different villages participated, and approximately two tons of fish were killed. The surplus yield is preserved by smoking, salting, and sun drying, but due to the crudity of the process it remains edible for a period of only one week to ten days. [123] [351]

GATHERING OF WILD VEGETABLE PRODUCTS

Gathering of wild vegetables and fruits is and was the least important subsistence activity and food source in Munduruc economic life; it is often done incidentally to hunting, fishing, or trips to the gardens. Among the main 222

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women are no longer as desirable as in the good old days, nor are men as brave and strong. Correspondingly, the shamans are thought to have lost much of their power and knowledge. Besides, there are significant social and economic reasons for the lapse of the ceremonies. The larger ceremony fell into abeyance after the migration to the Cururú River had gained full force, and the shorter form was terminated after the exodus had reduced the savannah population to its present 300. Significantly, the Dajarorparip ended in 1945, at the conclusion of the period of rising rubber prices in World War II and the concomitant growing preoccupation of the Munduruc Indians with extraction of latex. Thus, there is not only an insufficient number of shamans at present, but there are not enough people left in the savannahs to stage a large-scale reunion. Furthermore, only the campineiros, a bare one-quarter of the total Munduruc population, still depend on game as the principal source of protein; the others rely primarily on fishing, and the ceremonies have correspondingly less economic significance to them. Finally, to the degree that the old social system has weakened, so also has this positive, affirmative aspect of the religion. The rites were vital to tribal unity and male activity and were a function of them. The decay of intervillage cooperation in other spheres and the inevitability of eventual abandonment of residence on the savannahs make the Munduruc apathetic to the continuity of the group-based and group-affirmative rituals—actually, those aspects of relations with the supernatural that Emile Durkheim defined as "religion." * The people still believe in the game-animal spirits and still give credence to the efficacy of the ceremonial means of propitiating them. But the failure to translate the beliefs into the realm of action has robbed them of im-

* Durkheim, 1947.

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cutting the bark and the metal cups in which he collects the rubber, he always carries his arms, hopeful for stray game. He wends his way through the forest, making an incision in the bark and setting a cup below it on the outward journey and collecting the latex on the way home. He frequently stops to collect fruit, shoot a monkey, or bathe. After returning home he cures the latex in a small shed built for that purpose. He then goes to the adjacent river and bathes; if it is not too late he may fish with a bow and arrow from the bank. On days when he does not visit his rubber avenue, the Mundurucú hunts or fishes. He is joined by the other men of the house if there are any; otherwise his pursuit is solitary, and the favored collective-hunting techniques cannot be employed. This and the general lack of firearms, which if he had them would make lone hunting more productive, result in a marked decrease in hunting during the dry season. Fish may be taken by individuals, and the kill of a few hours is generally ample for the needs of a nuclear family. On the other hand, a solitary hunter may pass two or three days without killing more than birds or a small monkey.

Large dry-season households commonly make gardens near their rubber avenues, but single family units rarely do so because they do not have enough workers to clear forest land. The advantages of rubber-avenue gardens outweigh the labor and inconvenience of clearing and planting them. The resident families have a local supply of farinha, which would otherwise have to be made in the village and transported to the rubber avenue, a difficult chore without canoes. Also, the land in the savannah country is inferior in quality to that near the larger rivers. Almost every rubber-avenue garden is in black soil, and this favored land is extremely scarce in the vicinity of Caburi. These gardens are therefore frequently drawn upon to sup-

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crease the dependency of the individual on a large group.

As the migration continued and the villages grew in size, these conditions were perpetuated, for the increased use of firearms, bought through the now larger proceeds of rubber collection, made the collective hunt less necessary. Also, hunting was not as profitable on the Cururú, for the growing concentration of population along the river made game correspondingly scarcer, and fishing was, comparatively, a much more fruitful and stable source of subsistence. A further deterrent to hunting on the Cururú is that during the rainy season, the only period when the Indians have sufficient time to hunt, the low forest lands adjoining the river and its small tributaries are flooded, making the chase most difficult.

A shift of emphasis from male labor in hunting, which requires an expenditure in time of eight to ten hours a day, to fishing, necessitating only two to five hours for a good catch, left the men with considerable extra time. This time had to be used either for rubber collection or for helping their wives in the manufacture of farinha, because the early river-bank groups did not include sufficient women to carry on the old household or the village female work group. Even the boys were pressed into service, a sharp change from the free-roaming life of the sons of the campsiteiros.

The same circumstances enforced a complete breakdown of the organization of labor in gardening. The large male work groups of the savannahs were no longer possible, and the heavy work of garden clearing was done by the men of each household. If only one nuclear family represented the embryonic settlement, the man had to do all the work himself, aided to whatever extent possible by his wife and sons. All other phases of gardening work were

12:Murphy E-5 (1952-1953) 1960
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Hunting is infrequent and usually solitary, and fishing, unless done with timbó, requires the collective labor of only two people. Frequently, a man takes along his wife or son as a paddler when fishing with bow and arrow from a canoe. In the dry season, the all-year residents of Missão Velha join in timbó fishing at intervals of one to two weeks. If a large-scale expedition is contemplated, invitations are sent out to the families living in temporary isolation on the river banks. The residents of other villages who happen to tap rubber nearby are generally included in the party. The largest fish-drugging ventures are usually organized by the mission.

Cooperative gardening is most commonly done by the residents of one household, whether it represents one or three nuclear families. The men clear and burn the forest clearing, and both men and women plant, weed, and harvest. The same group is considered to own the garden produce, although the land is not owned here either. All household members share equally in the labor and results of farinha making. In Missão Velha, the residents of one-family dwellings sometimes join together in horticulture with one or two similarly situated families. As has been stated, this interhouse cooperation usually is between close relatives, although the same families do not necessarily pool their efforts every year.

Missão Velha has one farinha shed which houses the copper pan and furnace for toasting the grated manioc, the tipiti for squeezing out the poisonous liquid, several aluminum pans for sifting the tapioca, and a hand-operated mechanical manioc grater. Each household, or group of cooperating households, uses the facilities of the farinha shed in rotation and there is no cooperation or mutual help beyond the limits of the garden-owning group. The aluminum pans for extracting tapioca are individually